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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/433,475	11/04/1999	HARU KOMOOKA	909.0004USU	2618

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EXAMINER
WILEY, SAM A

ART UNIT	PAPER NUMBER
2671	

DATE MAILED: 02/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/433,475	Applicant(s) K.MOOKA ET AL.	
	Examiner Sam A Wiley	Art Unit 2671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-7 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-7 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4-5 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Claim Rejections - 35 USC § 112

Claim 1 recites the limitation "said opaque object" in line 7. There is insufficient antecedent basis for this limitation in the claim.

The claim refers to opaque objects in line two of the preamble. It is not clear which of these opaque objects is the said object referred to.

Claim 1 recites the limitation "said transparent object" in line 10. There is insufficient antecedent basis for this limitation in the claim.

The claim refers to semitransparent objects in line two of the preamble. It is not clear which of these semitransparent objects is the said object referred to.

Claim 1 recites the limitation "said transparent object" in line 13. There is insufficient antecedent basis for this limitation in the claim.

The claim refers to semitransparent objects in line two of the preamble. It is not clear which of these semitransparent objects is the said object referred to.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stroyan (5,993,333) and further in view of Fossum (5,220,646).

As per claim 1, Stroyan teaches (col.4, ln. 46-47) a three-pass method for drawing an image. As per the first step of claim 1, Stroyan teaches (fig.2 and col. 4, ln. 46-48) the drawing of opaque objects first. As per the second step of claim 1, Stroyan teaches (fig.2 and col. 4, ln. 54-57) disabling the z-buffer write and drawing a transparent polygon. As per the third step of claim 1, Stroyan teaches (fig. 2 and col. 6, ln. 24-27) drawing a transparent polygon.

Fossum teaches (fig. 2) a system wherein a z-buffer is enabled after being being disabled to draw a polygon.

Stroyan does not teach that in the third step the z-buffer is enabled for drawing the polygon. However, it would have been obvious to one of ordinary skill in the art to combine the systems of Stroyan and Fossum to yield a system wherein the z-buffer can be re-enabled for the third pass, because by enabling the z-buffer for the third pass, it is possible to draw and blend multiple transparent objects that are closer than the opaque object.

Stroyan does not specifically use the term "semi-transparent", as in the present claim. However, it would have been obvious to one of ordinary skill, because in the computer graphics art transparent and semi-transparent are treated identically, because a truly transparent object is simply an object with no color that is blended whatever is behind it, and a semi-transparent object is a colored object that is blended with whatever is behind it.

As per claim 2, Stroyan teaches (fig. 2) the use of alpha blending when blending a transparent object with an opaque object.

As noted above, Stroyan does not specifically use the term "semi-transparent", as in the present claim. However, it would have been obvious to one of ordinary skill, because in the computer graphics art transparent and semi-transparent are treated identically, because a truly transparent object is simply an object with no color that is blended whatever is behind it, and a semi-transparent object is a colored object that is blended with whatever is behind it.

As per claim 3, Stroyan teaches (fig.1) a system comprising a z-buffer (126), a frame buffer (114) and rendering method (126).

As per claim 3, Stroyan teaches (col. 1, ln. 45-49) the z-buffer algorithm in which depth information can be compared to determine if the current it is closer than the information stored in the z-buffer.

As per claim 3, Stroyan teaches (col.4, ln. 40 –50 and col.4, ln. 51-53) that the rendering method deraws and blends pixels.

Fossum teaches (fig. 2) a system wherein a z-buffer can be enabled or disabled.

Stroyan does not teach that the rendering method is capable of selecting either to output the data while updating the z-buffer or not updating the z-buffer. However, it would have been obvious to one of ordinary skill in the art to combine the systems of Stroyan and Fossum to yield a system wherein the z-buffer can be re-enabled for the third pass, because by enabling the z-buffer for the third pass, it is possible to draw and blend multiple transparent objects that are closer than the opaque object.

As per claim 4, Stroyan (fig. 1 and col. 4, ln. 34-36) teaches a display system for displaying computer graphics.

Stroyan does not teach that the graphic data is outputted directly from the frame buffer. However, it would have been obvious to one of ordinary skill, because the frame buffer in the graphic arts is generally storage for holding the visible frame before it is outputted to a display device.

As per claim 5, Stroyan teaches (fig. 2) the use of alpha blending when blending a transparent object with an opaque object.

As noted above, Stroyan does not specifically use the term "semi-transparent", as in the present claim. However, it would have been obvious to one of ordinary skill, because in the computer graphics art transparent and semi-transparent are treated identically, because a truly transparent object is simply an object with no color that is blended with the image of whatever is behind it, and a semi-transparent object is a colored object that is blended with the image of whatever is behind it.

As per claims 6 and 7, Stroyan teaches (col.4, ln. 51-53) that the objects are rasterized. As per claims 6 and 7, Stroyan also teaches (fig. 1) a display device (110) for displaying the rendered graphics.

Stroyan does not specifically teach that the display device (110) must be a raster scan display. However, it would have been obvious to one of ordinary skill in the art, because the rendered objects of Stroyan are rasterized and thus would most efficiently be displayed on a raster scan display.Any inquiry

concerning this communication or earlier communications from the examiner should be directed to **Sam Wiley** whose telephone number is **(703) 605 - 4248**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Mark Zimmerman**, can be reached at **(703) 305-9798**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600